

Abstract Submitted  
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**Virtual diagnostics in NIMROD simulations for direct comparison to SSPX measurements** T.L. STEWART, C.A. ROMERO-TALAMAS, H.S. MCLEAN, D.L. CORRELL, L.L. LODESTRO, B.J. WHITLOCK, Lawrence Livermore National Laboratory, B.A. NELSON, Univ. of Washington, SSPX TEAM — The visualization code VisIt is being used to analyze numerical simulations of the Sustained Spheromak Physics Experiment [E. B. Hooper, L. D. Pearlstein, and R. H. Bulmer, *Nucl. Fusion* **39**, 863 (1999)], obtained using the three-dimensional, resistive magnetohydrodynamic code NIMROD [C. R. Sovinec, A. H. Glasser, T. A. Gianakon, et al., *J. Comput. Phys.* **195**, 355 (2004)]. Virtual diagnostics, such as insertable and edge magnetic probes, and Thomson scattering, are being installed in the simulation domain at locations corresponding to the experimental diagnostics, in order to directly compare simulated and real measurements. Initial results of these comparisons will be presented. Work performed by Lawrence Livermore National Laboratory under the auspices of the U.S. Department of Energy, Contract DE-AC52-07NA27344.

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